

REMARKS

The rejection of claims 1 and 4 - 10 as unpatentable over Danko in view of Kodate, and the rejection of claims 12, 13 and 16 - 18 as unpatentable over Danko are both respectfully traversed.

It is respectfully submitted that the above noted claims define an apparatus that is patentably different from Danko alone and/or in view of Kodate.

Applicant has invented an apparatus and method for detecting particles on a surface of a semiconductor wafer having repetitive patterns which includes a laser for illuminating an area on the front surface with a beam of polarized light. A lens collects light scattered from the area and forms a Fourier diffraction pattern of the area illuminated. A Fourier mask blocks out light collected by the lens at locations in the Fourier diffraction pattern where the intensity is above a predetermined level indicative of background information and leaves in light at locations where the intensity is below the threshold level indicative of possible particle information. The Fourier mask includes a spatial light modulator and a polarization discriminator. A camera detects scattered light collected from the area by the lens and not blocked out by the Fourier mask. In one embodiment of the invention the spatial light modulator is optically addressable and in other embodiments of the invention the spatial light modulator is electrically addressable. The electrically addressable versions include a processor and an SLM controller.

Danko discloses an apparatus for detecting particles on the front surface of a patterned semiconductor wafer having repetitive patterns which includes a laser for illuminating an area on the front surface at grazing angle of incidence with a beam of

polarized light. A lens collects light scattered from the area and forms a Fourier diffraction pattern of the area illuminated. A Fourier mask blocks out light collected by the lens at locations in the Fourier diffraction pattern where the intensity is above a predetermined level indicative of background information and leaves in light at locations where the intensity is below the threshold level indicative of possible particle information. The Fourier mask includes an optically addressable spatial light modulator and a crossed polarizer with the Fourier diffraction pattern being used as both a read beam and a write beam for the spatial light modulator. A camera detects scattered light collected from the area by the lens and not blocked out by the Fourier mask.


Kodate describes, among other things, a liquid crystal display comprising an array substrate having pixel electrodes arranged like a matrix, an active element for each of the pixel electrodes, a storage capacitance provided at some of the pixel electrodes, and a storage capacitance line for outputting the reference potential of the storage capacitance; a facing substrate having a plurality of pillars arranged so as to face the array substrate, the pillars being formed higher than other portions of the facing substrate, the pillars together with objects formed on the array substrate that face the pillars specifying a cell gap, and a common electrode for all pixels covering at least some of the pillars, the common electrode being electrically connected to the storage capacitance line at the portions of the common electrode covering the pillars; a liquid crystal layer held between the array substrate and facing substrate; and a polarizing film.

Applicant is not in agreement with the Examiner's analysis of Danko and Kodate as set forth in paragraph 3 of the Office Action or the comments set forth in paragraph 4

of the Office Action. At least some of the reasons for disagreement are set forth in pages 8 - 10 in the Amendment filed on May 30, 2003, and repeated herein.

Allowance of the application with claims 1, 4 - 10, 12, 13 and 16 - 22 is earnestly solicited.

Respectfully submitted,


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Date: February 19, 2004
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 19, 2004.



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